REMARKS

This Response is filed within two months of the mailing date of the Final Office Action dated January 13, 2005. Claims 1-24 are pending, with claims 1, 11, 17 and 22 being the only independent claims. Claims 1, 2, 11, 17, 22 and 23 have been amended. No new matter has been added by way of the amendment. Reconsideration and withdrawal of rejections are respectfully requested.

Claims 1-9, 11-15, 17 and 19-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,460,056 ("*Horii*") and U.S. Patent No. 6,665,643 ("*Lande*"). Claims 10, 16, 18, and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Horii* and *Lande*, and further in view of "Text-driven automatic frame generation using MPEG-4 synthetic/natural hybrid coding for 2-D head-and-shoulder scene" ("*TDAFG*").

Claims 1 and 11 have been amended to recite the steps of "processing [an] audio/video signal to generate an isolated audio component signal; isolating the speech component from the isolated audio component signal; and rendering an animation image on a portion of the monitor based on the animation signal generated from said animation model parameters." These claim limitations were previously in claim 2; therefore these amendments do not raise any new issues requiring further research or consideration. Support for the amendments may be found at page 8, lines 3-10 and page 9, lines 1-4 of the specification). No new matter has been added.

The invention relates to the display of a sign language animation image corresponding to a speech component of an audio/video (A/V) signal. Specifically, the sign language animation image is displayed simultaneously with a visual image corresponding to a video component of the audio/video signal. This functionality is accomplished by isolating a speech component from the audio signal components of the A/V signal. The isolated audio component signal is processed to obtain the speech components of the A/V signal. These speech components are mapped to a sign language animation model to generate animation model parameters which correspond to sign language images. An animation signal is generated using the animation model parameters. The resulting animation model parameters are then transmitted along with the A/V signal to a monitor display, wherein an animation image is rendered from the animation signal on a monitor display screen based on the animation signal generated from the animation model parameters (see page 4, lines 1-16 of the specification).

In contrast, *Horii* relates to an image display method and apparatus for displaying sign language images corresponding to speech (see col. 1, lines 12-14). According to *Horii*, image

data (such as sign language images) are stored in an image dictionary in motion picture form. Document data is read out from a character information storage device (or speech data is received), and a sign language image corresponding to a character string of the document data (or the speech) is selected from the image dictionary and displayed on a display (see Abstract). However, *Horri* fails to teach, *inter alia*, the steps of "processing [an] audio/video signal to generate an isolated audio component signal; isolating ... speech components from the isolated audio component signal ... and ... rendering an animation image on a portion of [a] monitor based on the animation signal generated from said animation model parameters, [wherein the] animation image [contains] sign language gestures corresponding to the speech component of the audio/video signal," as recited in amended independent method claims 1 and 11.

Horii teaches a microphone input terminal 11 of a speech recognizer (see Fig. 3 and Fig. 4). *Horii* states the voice signal input from the microphone input terminal 11 is amplified by the amplifier 12, and recognized by the speech recognizer 13 (see col. 4, lines 14-17). *Horii* also teaches a video input terminal 21 of a video input processor 22 (see Fig. 4). In each of the systems described in *Horii*, the speech signal is separate from the video signal. That is, there is no "processing [of an] audio/video signal to generate an isolated audio component signal," as recited in amended independent method claims 1 and 11.

With reference to Fig. 1 of the present invention, an A/V separator block 12 is provided for separating or splitting an input A/V signal and outputting at least two outputs. The first output provides the complete unaltered A/V signal. The other output provides only the audio component of the A/V signal (see pg. 8, lines 4-8 of the specification). Once the audio component is separated from the A/V signal, a speech isolator block 14 is then is then used to identify and isolate the speech component from the remainder of the audio signal (see pg. 8, lines 8-10 of the specification). *Horii* fails to teach or suggest the step of processing an A/V signal to generate an audio component signal, as recited in independent method claims 1 and 11.

Lande relates to a method and apparatus for receiving information items and for applying appropriate, geometric deformations to any facial model complying with the MPEG-4 standard (see col. 2, lines 32-35). *Lande* discloses the splitting of information characterizing the position of the speakers mouth into groups of parameters characterizing mouth shape and positions of lips and the jaw of a face model (see col. 2, lines 52-58). *Lande* discloses the analyzing an speech signal to animate facial expressions (i.e., the lips and jaw of a face), as opposed to animating sign language. *Lande* fails to cure the deficiencies of *Horii*. Specifically, *Lande* combined with *Horii* fails to teach

or suggest the steps of "processing [an] audio/video signal to generate an isolated audio component signal; isolating ... speech components from the isolated audio component signal ... and ... rendering an animation image on a portion of [a] monitor based on the animation signal generated from said animation model parameters, [wherein the] animation image [contains] sign language gestures corresponding to the speech component of the audio/video signal," as recited amended independent method claims 1 and 11."

TDAFG has been cited as teaching the use of SNHC to generate animation parameters. However, *TDAFG* also fails to cure the deficiencies of the system defined by the combination of *Horii* and *Lande*, because the initial step of processing an A/V signal to generate an audio component signal is also not disclose in *TDAFG*. In view of the foregoing, amended independent method claims 1 and 11 are patentable over the combination of *Horii*, *Lande*, and *TDAFG*. Consequently, reconsideration and withdrawal of the rejections under 35 U.S.C. §103(a) is in order, and a notice to that effect is requested.

Independent claims 17 and 22 are system claims associated with the implementation of independent method claims 1 and 11, respectively. Accordingly, independent system claims 17 and 22 are also patentable over the combination of *Horii*, *Lande*, and *TDAFG* for the reasons discussed above with respect to independent method claims 1 and 11.

In view of the patentability of independent claims 1, 11, 17, and 22, for the reasons above, dependent claims 2-10, 12-16, 18-21, 23 and 24 are all patentable over the prior art.

Applicants submit that the amendment to the claims and the arguments herein do not raise news issues that would require further search. Applicants request entry of this amendment and submit that this application is in condition for allowance. Early passage of this case to issue is requested.

Respectfully submitted,

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